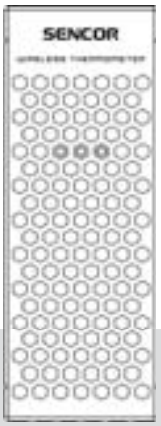
SENCOR®

SWS 140



USER'S MANUAL

Barometric Weather Station with Radio Controlled Clock and In/ Out Thermometer

NÁVOD K OBSLUZE

Meteorologická stanice s barometrem, rádiem řízenými hodinami a vnitřním/venkovním teploměrem

NÁVOD NA OBSLUHU

Meteorologická stanica s barometrom, rádiom riadenými hodinami a vnútorným/vonkajším teplomerom

FELHASZNÁLÓI KÉZIKÖNYV

Meteorológiai állomás barométerrel, rádióvezérelt órával és kinti/benti hőméréssel

INSTRUKCJA OBSŁUGI

Stacja meteorologiczna z barometrem, zegarem sterowanym radiowo i wewnętrznym/zewnętrznym termometrem

EN | CZ | SK | HU | PL

Table of contents

1. INTRODUCTION 2

2. OPERATING ELEMENTS 3
   - 2.1 LCD (DISPLAY) AND KEYS / FRONT VIEW / REAR VIEW 3
   - 2.2 STAND 5
   - 2.3 REMOTE TEMPERATURE SENSOR 6

3. PUTTING INTO OPERATION 7

4. OPERATION. 9
   - 4.1 WEATHER FORECAST 9
   - 4.2 TEMPERATURE WINDOW 10
   - 4.3 CLOCK WINDOW. 12
     - 4.3.1 TIME FUNCTION 12
     - WAKE-UP ALARM FUNCTION 15

5. TROUBLESHOOTING 17

6. CARE INSTRUCTIONS 18

7. TECHNICAL DATA 19

1. INTRODUCTION

Thank you for selecting the HBR553 from IROX. In your hands, you hold a high-quality weather station which we have equipped with additional functions that have above-average design and functionality in a market comparison.
Please keep this manual handy as it contains practical instructions, technical specifications and precautions.

In this package, you will find:
- One main unit (receiver)
- One separate table stand
- One single-channel remote sensor (transmitter)
- One user manual

FEATURES OF THE MAIN UNIT

Time

- Precise time and date set via radio controlled time signals (DCF 77) from the time transmitter in Frankfurt
- 12 or 24 hour time format selectable
- Manual adjustment of time and date (ideal if no DCF77 reception)
- Calendar date with month and day in 7 languages English, German, French, Italian, Spanish, Dutch and Swedish
- Separate weekday and single alarm with crescendo function
- Programmable per alert alarm in case of potential ice on the road

Weather

- Weather forecast for the next 12 to 24 hour in seven large icons: sunny, slightly cloudy, cloudy, rainy, heavy rainy, snowy and heavy snowy.
- User-defined high/low temperature alarm
- Indoor temperature
- Outdoor temperature from up to 3 remote locations (Channel 1 sensor included, additional sensors required for Channel 2 and 3)

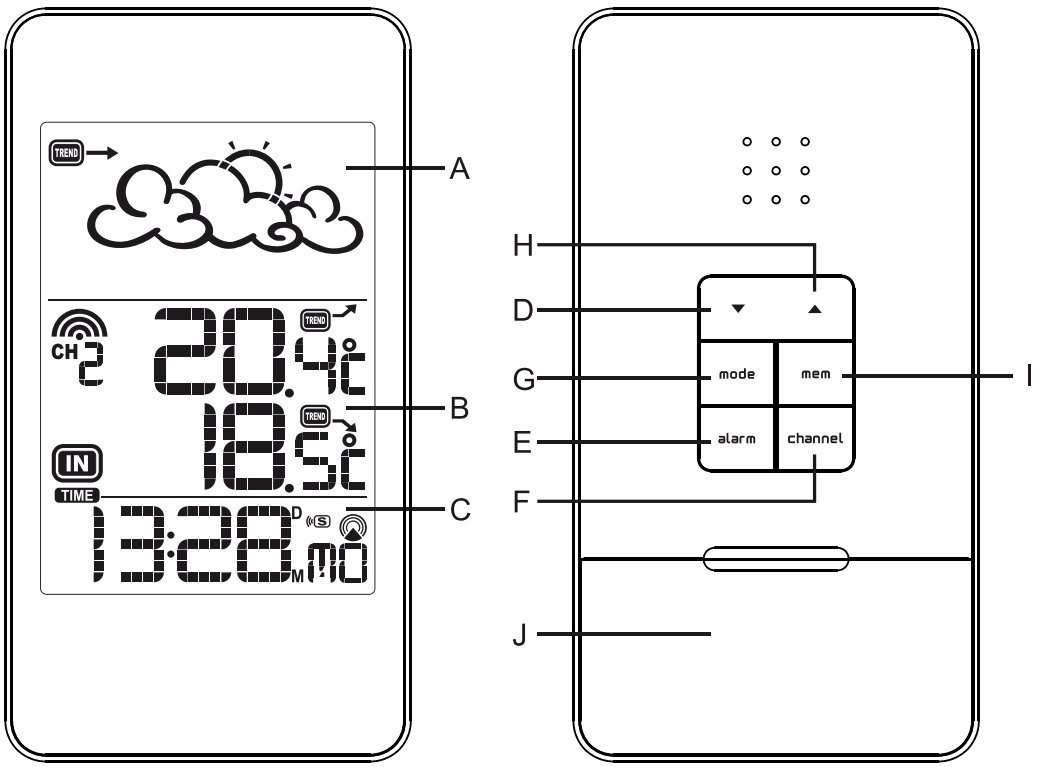
FEATURES OF THE REMOTE SENSOR

- Remote data transmission to the main unit via 433 MHz radio frequency

2. OPERATING ELEMENTS

2.1 LCD (DISPLAY) AND KEYS / FRONT VIEW / REAR VIEW

All functions are depicted on the liquid crystal display (LCD) in 3 windows.



A. WEATHER window

B. TEMPERATURE window

C. CLOCK window

D. ▼ (DOWN) button

- Select the other window (Clock or Temperature)
- Press and hold for 2 seconds to search for wireless radio signal from remote sensor.
- Decrease parameters in the setting mode.

E. ALARM button

- When clock window has been selected, press once to display the alarm time of weekday alarm (W), single alarm (S) and pre-alarm (Pre-AL).
  ---> Hold for 2 seconds, set weekday, single or pre-alarm's alarm time.
- When temperature window has been selected, press once to display the highest or lowest temperature alarm's value.
  ---> Hold for 2 seconds, set the highest or lowest temperature alarm's value.
- When alarm (time or temperature) is on, press once to stop the alarm.

F. CHANNEL button

- Press to display the outdoor temperature readings of Channels 1, 2 and 3. (additional remote sensors are required)
- Hold for 2 seconds, enter into the circulation mode and outdoor temperature readings of Channels 1, 2 and 3 will be displayed automatically in every 5 seconds.

G. MODE button

- When clock window has been selected, press once to toggle between time with seconds display or time with weekday display.
  ---> Press and hold for 2 seconds, set language of the day of the week, year digit, month digit, date digit, hour format (12/ 24 hours), calendar format, hour digit and minute digit.
- When temperature window has been selected, press and hold for 2 seconds to toggle the temperature unit between Celsius or Fahrenheit.

H. ▲ (UP) button

- Select the other window (Clock or Temperature)
- Increase the parameters in setting mode
- Press and hold for 2 seconds to activate/ deactivate radio controlled time signal search manually.

I. MEM (HISTORY) button

- When temperature window has been selected, press to recall the minimum or maximum temperature readings of main and remote units.
- Press and hold for 2 seconds, collected memories will be cleared.

J. BATTERY COMPARTMENT

- Accommodates two (2) AAA batteries

2.2 STAND

K. TABLE STAND

- In addition you will find a separate table stand, giving the unit a special elegance when positioned in a shelve or on a table.

2.3 REMOTE TEMPERATURE SENSOR

A. BATTERY COMPARTMENT: Holds two AAA-size batteries.

B. WALL-MOUNT RECESSED HOLE: Mount the sensor using the clip on the wall.

3. PUTTING INTO OPERATION

The communication between the main unit (receiver) and the remote sensor (transmitter) is wireless using radio waves, thus simplifying the installation. The remote temperature sensor transmits data to the main unit, with an operating range of up to 100 feet (30 meters) in opened area.
The remote temperature sensor can be placed indoors or outdoors, depending on the area where the temperature is intended to be measured. If you intend to measure outdoor conditions, place the remote sensor outdoors.

Start-up the transmitter-receiver communication:

- It is important to power-up the remote sensor BEFORE powering-up the main unit. Immediately after batteries are installed, the remote sensor will start transmitting a temperature data to the main unit.
- It is strongly recommended to power up and test communication between the remote sensor and the main unit BEFORE permanently mounting the sensor outside.
- During initial set up, place the remote sensor within a range of 1m to the main unit in the same room, both receiver and transmitter far from any other electric product.
- After reception is established (remote readings will appear on the main unit's display), position the remote sensor and the main unit within the maximum transmission range of up to 30 meters (100 feet) in open space.

NOTE:

- Avoid pressing any button on the main unit before the remote readings are displayed.
- Transmission or reception range may be affected by trees, metal structures, electronic appliances, surrounding building materials and how the main unit and transmitter are positioned.

Placement of sensor and main unit

- Place the remote sensor so that it faces the main unit (receiver), minimizing obstructions such as doors, walls and furniture.
- Though the remote sensors are weather-resistant, they should be placed away from direct sunlight, rain or snow. The optimal location for the outdoor sensor is under the eaves on the north side of a building with free air circulation.
- The remote sensor can be placed on the flat surface or mounted on the wall in vertical position by using the included stand. For fixing the stand, use a screw, rather than a nail.
- Ideally, place the remote sensor over soil, rather than asphalt which may affect the correct measurement.
- Avoid placing the remote sensor near sources of heat, such as chimneys and heating elements
- Avoid areas that collect heat from the sun and radiate heat, such as metal, brick or concrete structures, paving, and patios
- The international standard for the valid air temperature measurements is 1.25meters (4 feet) above the ground
- Make sure that the main unit is locating within the operating range of all remote sensors.
- Ideally the main unit should be placed within line of sight of remote sensors. Avoid placing the main unit where surfaces emitting and radiating heat (e.g. heating ducts or air conditioners) and areas with interference from wireless devices (e.g. cordless phones, radio headsets, baby monitoring devices and other electronics).

Important notice about batteries

- We recommend the use of **alkaline batteries**. Advantage of this is a better performance in case the outside temperature falls below 0° (32°F). For optimum performance, we recommend even lithium batteries.
- Avoid using rechargeable batteries. (Rechargeable batteries cannot maintain correct power requirements.)
- **Always** install batteries in the **remote** sensor **before** the main unit.
- Insert batteries before first use, matching the polarity in the battery compartment.

4. OPERATION

Immediately after batteries are installed, the remote sensor will start transmitting the temperature data to the main unit in regular intervals.
Once the main unit is powered-up by activating the batteries, the display will show all available LCD segments for a moment.

IMPORTANT: After this, the unit will scan the remote sensors (Ch 1 to Ch 3) in the **Temperature Window**. There is no immediate need to press any button during this process.
After this, the unit will start to search for the DCF77 time transmitter in the **Clock Window**.
Thereby, the default time the unit has started with at the beginning is 12:00. Here too, there is no immediate need to press any button during this process.

Recommendation: Allow the unit to receive the sensors and the time **without touching ANY button** for about 6-8 minutes during the main unit initial set up. This will give the unit time to synchronize with remotes, stabilize pressure readings and settle with default settings.

4.1 WEATHER FORECAST

This unit is capable of detecting the atmospheric pressure changes. Based on collected weather data, it forecasts the weather for the next 12 to 24 hours.

When the display shows...							
Forecast is...	Sunny	Partly Cloudy	Cloudy	Rainy	Heavy Rainy	Snowy	Heavy Snowy

NOTE: The weather forecast accuracy is approximately 70%. The HBR553 shows the forecasted (predicted), not the current conditions. The SUNNY icon indicates clear weather, even when displayed during the night-time.

4.2 TEMPERATURE WINDOW

The main unit supports up to 3 remote sensors, each corresponding to a separate channel of the temperature display. The temperature can be displayed in Celsius (ºC) or Fahrenheit (ºF).
A temperature alert function is available for all channels. It can be programmed to sound once one of the remote temperatures exceeds or falls below the pre-set upper and lower limits.

OPERATION OF THE TEMPERATURE WINDOW

For all operations described in Chapter 4.2, press **UP** (▲) or **DOWN** (▼) until the IN icon, to the left of the indoor temperature value, begins to flash.

FORCED SEARCH FOR REMOTE SENSORS

Select the TEMPERATURE window.
The main unit can be manually activated to search for signals from remote sensors by pressing and holding the **DOWN** (▼) button for 3 seconds.

The wave icon above the current channel icon shows the connection status of the corresponding remote sensor:

Icon	Status
	Searching for the signals from the remote sensor
	Corresponding remote sensor signal received successfully
	No signals received for over 1 hour

With this search procedure the device searches the same sensor that was already previously logged in. If you replace the batteries in the sensor, the sensor gives itself a new code and will then no longer be recognized by the display unit. You can resolve this problem by:

- removing the batteries from the display unit and replacing them with new ones

or

- if the batteries are still O.K., repeating the logging in procedure as described above by pressing and holding the▼ button for 3 seconds and while the wave icon is blinking, press and hold the ▼ button again for 3 seconds. The temperature indicator will start to blink indicating that a new sensor is being searched for and will be logged in.

VIEWING REMOTE (CHANNEL) TEMPERATURE

Select the TEMPERATURE window.

Static Display: Press the **CHANNEL** button to select measurements from different remote sensors (channel 1, 2 or 3).
Channel Auto-Scan Display: To enable an automatic scan of all present channels, press and hold CHANNEL, until the icon is displayed. The measurements from each remote channel will be alternately displayed with a 5 seconds viewing.

NOTE: the channel auto-scan feature can be activated only if there are more than one remote sensors operating and are set to different channels.

PROGRAMMING TEMPERATURE IN CELSIUS OR FAHRENHEIT

Select the TEMPERATURE window.
Press and hold **MODE** button for 3 seconds to toggle the temperature unit in Celsius (ºC) or Fahrenheit (ºF).

TEMPERATURE ALARM

Select the TEMPERATURE window.
Press **ALARM** button selecting the desired alarm, the upper temperature alert with ▲ icon (if disabled, display shows OFF), or lower temperature alert with ▼ icon (if disabled, display shows **OFF**).
Press and hold **ALARM** button until the temperature digits flashing. Adjust the temperature digits using the **UP** (▲) or **DOWN** (▼). Press and hold either button for fast setting. Press the **ALARM** to confirm selection and return to the temperature alarm selection screen
ACTIVATING OR DEACTIVATING TEMPERATURE ALARMS:
Once the above alerts are displayed, press the **UP** (▲) to enable or **DOWN** (▼) to disable the alert.

VIEWING MAX/MIN READINGS

Select the TEMPERATURE window.
Press the **MEM** button to read the minimum temperature of all sensors (indoor and remote) with the MIN, next MEM press the maximum values with the **MAX** icon and then back to the current values.

RESETTING TEMPERATURE MEMORIES

Select the TEMPERATURE window.
Press and hold the **MEM** button for 3 seconds to clear all max/min memories.

4.3 CLOCK WINDOW

For all operations described in Chapter 4.3, press **UP** (▲) or **DOWN** (▼) until the **TIME** icon, in the left corner of the time window, begins to flash.

4.3.1 TIME FUNCTION

The radio controlled time signal (DCF 77) is transmitted from the central atomic clock in Frankfurt/Main. It has a reception range of approx. 1500 km. If the tower icon is not fully lit, or if the time and date are not set automatically, please consider the following:
During night-time hours, atmospheric disturbances are typically less severe and radio signal reception may improve. A single daily reception is sufficient enough to keep the clock accuracy within 1 second.
Make sure the unit is positioned at least 2 meters (8 feet) distance from any interference source such as a TV, computer monitor, microwave, etc.
Within concrete and /or metal wall rooms, such as basements or office buildings, the signal may be weakened. In such a case, place the main unit near the window for better reception. Sometimes it also helps to turn the unit by 90°

NOTE: In any of below described settings, the unit will automatically exit any programming mode if it does not detect a button press for about 2 minutes. Any setting made before this will not be taken over by the unit. Therefore, as long you are in a setting and you have made changes, close the setting mode as described in below chapters.

HOW TO SET THE RADIO CONTROLLED CLOCK

1. After the batteries are installed. The clock will search the radio signal automatically (DCF77 from Germany). It takes about 3-10 minutes to finish this process.
2. If you wish to disable the auto-reception feature, hold **UP** (▲) for 3 seconds to disable it. Having done that, the tower icon will disappear.
3. To enable the auto-reception feature again, hold **UP** (▲) for 3 seconds again to start the reception and the regular synchronization (daily at 0:00, 3:00, 6:00 and 12:00).

ICON	Time Signal Reception Strength
(Flashing)	Undefined data
	No Reception for the past 24 hours
	Weak signal, but can be decoded
	Strong signal

4. If the radio signal is received, the date & time will be set automatically and the radio control signal icon [ ] turns on.
5. If the clock fails to receive the time signal, it will show the [ ] icon. If the time is not correct, you may set the time manually.

HOW TO SET THE CLOCK MANUALLY

To set the clock manually, make sure the display shows the time (**not** the **ZONE**) and then press and hold MODE.
Now it will show the language. You may choose among English (En), German (DE), French (Fr), Italian (IT), Spanish (SP), Dutch (Du) and Swedish (SW). Press **UP** (▲) or **DOWN** (▼) to change it.
Press **MODE** to confirm. Repeat the same procedure to set the year, month, day, day-month format, 12/24 hour format, hour and minute. During the setting, press and hold will change the value rapidly.
If there is an item you do not wish to change, simply press **MODE** to bypass the item.
After the last setting, pressing **MODE** will exit the setting mode and return to the clock mode.

HOW TO SET THE TIME ZONE

To set the time zone, make sure the display shows the time with the **ZONE** icon. Then press and hold **MODE**.
Press **UP** (▲) or **DOWN** (▼) to adjust value in steps of 30 min. Press and hold either button for fast advance. Press **MODE** to confirm your selection.

SELECT THE CLOCK/CALENDAR DISPLAY

Each time you press **MODE**, you may rotate from one of the following displays to the next:

- Hour: Minute: Second
- Hour: Minute: Weekday
- Hour: Minute: Weekday of the Time Zone
- Hour: Minute: Second of the Time Zone
- Day: Month

WAKE-UP ALARM FUNCTION

There are three time alarms available on the main unit:

* Weekday Alarm **W**
  The alarm sound will be activated and the icon will flash on weekdays (Mo-Fr) when it is armed and the alarm time is reached.
* Single Alarm **S**
  The alarm sound will be activated and the icon will flash when it is armed and the alarm time is reached. Once it finished, it will be disabled automatically
* Black ice warning **PRE-AL**
  The pre-alarm will be activated and the icon will flash if the temperature of channel 1 is falling to +0 ºC or below.
  It is programmable 15, 30, 45, 60 or 90 minutes earlier than the weekday alarm or single alarm time.

ACTIVATING / DEACTIVATING THE TIME ALARMS

1. Press **ALARM** to rotate between:
   - Weekday Alarm Time (displays OFF if weekday alarm deactivated)
   - Single Alarm Time (displays OFF if single alarm deactivated)
   - Pre-Alarm Time (displays OFF if pre-alarm deactivated)
2. When the above alarms are displayed, pressing **UP** (▲) will activate, pressing **DOWN** (▼) will deactivate the corresponding alarm.

NOTE: Press **MODE** anytime during above alarm selection mode to return to normal clock display.

SETTING THE TIME ALARMS

1. Press **ALARM** to select the alarm which you wish to configure.
2. Press and hold **ALARM** until hour starts flashing in the display
3. Set Alarm Hour:
   Press **UP** (▲) or **DOWN** (▼) to adjust. Press and hold either button for fast changes.
   Press **ALARM** to confirm your selection.
4. Set Alarm Minutes:
   Press **UP** (▲) or **DOWN** (▼) to adjust. Press and hold either button for fast changes.
   Press **ALARM** to confirm your selection
5. Upon completion the display will be returned to the alarm selection screen.

NOTE: Pre-alarm cannot be activated if weekday alarm or single alarm is not enabled.

STOP THE ALARM SOUND

The alarm will sound for 2 minutes with increasing intensity.
To stop it, press **ALARM** during the Alarm Sound to disable the alarm.
Note: For weekday alarm, pressing **ALARM** will only disable the alarm for the current day. The alarm will be activated again the next day (if it falls within Monday to Friday).
If the Alarm is not interrupted by pressing the ALARM key while the sound is active, it will repeat itself after 8 minutes for 3 times. If you want to stop the alarm in one of the 8 minute periods, you have to do as described in „Activating/Deactivating the Time Alarms“.

5. TROUBLESHOOTING

In case of a malfunction, always check the batteries and replace them in the main unit and in the sensor(s) with new ones.
Please also check below issues before contacting customer service.

Issue	Symptom	Solution
Main unit	Radio Controlled Time signal is not received	Place unit by the window and keep it there overnight
Remote sensor	Cannot locate remote sensor	Check batteries
		Check location
		Press and hold **DOWN** (▼) button on the main unit to search for the signal form the remote sensor
		Read sections 3 and 4.2

6. CARE INSTRUCTIONS

- Do not expose the device to extreme temperatures or direct sunlight over longer periods.
- Avoid blows and shocks of any kind to the device.
- For cleaning use a dry soft cloth that you have moistened with water and a mild cleaning agent. Never use volatile substances such as benzene, thinner, cleansing agents in spray cans etc.
- When the device is not being used store it in a dry area and out of the reach of small children.
- If the device is activated under extreme coldness it may occur that the display becomes illegible. As soon as it is returned to a warm environment the device will function normally.
- Please keep the user's manual and other documents delivered with the device stored carefully so that you can reference them at a later point if necessary.
- Please use only new batteries and never mix old and new batteries.
- Please also remember that old batteries should not be disposed of with household waste but should be handed in at the designated collection centres.

7. TECHNICAL DATA

MAIN UNIT

Indoor Temperature

Operating range: -5°C to +50°C / 23.0°F to 122.0°F
Temperature resolution: 0.1°C / 0.2°F
Measuring accuracy: +/- 1 °C(0 °C to 40 °C) and +/-2 °C(0 °C to -10 °C; 40 °C to 60 °C)

Power

2 × AAA size 1.5V batteries

Dimensions

70(L) × 130(H) × 14(W) mm
Weight: 160 g

REMOTE SENSOR

Temperature

Operating range with alkaline batteries: -10°C to + 60°C (14°F to + 140°F)
Temperature resolution: 0.1°C/ 0.2°F
Measuring accuracy: +/- 1 °C(0 °C to 40 °C) and +/-2 °C(0 °C to -10 °C; 40 °C to 60 °C)

Sampling Interval: 10 seconds
RF Transmission Frequency: 433 MHz
RF range: Maximum 100 feet (30 meters)
Temperature transmission cycle: approximately 45 seconds
Table stand

Power

2 × AAA size 1.5V batteries

Dimensions

37.5(L) × 110(H) × 23(W) mm
Weight: 43 g

The weather station is supplied in the following frame and stand colours:

SWS 140 BU – blue frame and stand
SWS 140 GN – green frame and stand
SWS 140 RD – red frame and stand

INSTRUCTIONS AND INFORMATION ABOUT THE HANDLING OF USED PACKAGING

Take the packaging material to a designated municipal waste facility.

DISPOSAL OF USED ELECTRICAL AND ELECTRONIC EQUIPMENT

This symbol on products or original documents means that used electric or electronic products must not be added to ordinary municipal waste. For proper disposal and recycling, take these products to designated collection points. Alternatively, in some European Union states or other European countries you may return your appliances to the local retailer when buying an equivalent new appliance.
Correct disposal of this product helps save valuable natural resources and prevents damage to the environment caused by improper waste disposal. Ask your local authorities or collection facility for more details.
In accordance with national regulations penalties may be imposed for the incorrect disposal of this type of waste.

For business entities in European Union states
If you want to dispose of electric or electronic devices, ask your retailer or supplier for the necessary information.

Disposal in other countries outside the European Union.
This symbol is valid in the European Union. If you wish to dispose of this product, request the necessary information about the correct disposal method from the local council or from your retailer.

CE

Fast ČR, a.s. declares that SWS 140 BU, GN, RD + SWS 4 TS conform to the basic requirements and other relevant provisions of the directive 1999/5/ES. The device can be operated in the EU without restriction. The declaration of conformity is a part of the user‘s manual or can be found at the website www.sencor.eu.

Changes in the text, design and technical specifications may occur without prior notice and we reserve the right to make these changes.